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Apparatus, Special, for Cleaning Producer Gas.

Apparatus, Special, for Gas Cleaning.

Apparatus, Special, for Production of Ammonium Sulphate (without Sulphuric Acid).

Apparatus, Special, for Production of Potassium Ferrocyanide.

Apparatus, Special, for Production of Sodium Ferrocyanide.

Boilers, Waste Heat.

Charging Machines.

Charging and Discharging Machines, Combined.

Condensers.

Conveyors, Hot Coke.

Discharging Machines.

Equipment, Special, for Gas and By-product Plants.

Fittings, Special.

Holders, Gas.

Plants, Blue Water Gas.

Plants, Carburetted Water Gas.

Plants, Coal Gas.

Plants, Coal Gas By-products.

Plants, Coke Screening.

Plants, for Manufacture of Ammonium Sulphate.

Plants, for Manufacture of Concentrated Ammonia and Aqua Ammonia.

Plants, for Recovery of Benzol.

Plants, for Recovery of Cyanogen.

Plants, for Recovery of Naphthalene.

Plants, for Recovery of Tar.

Purifier Boxes.

Scrubbers.

Scrubbers, Centrifugal Vertical Type.

Tanks, Steel.

Tar Extractors.

Valves.

Fast Flexible Turbo Coupling.

B. H. Co.—De Brouwer Type Charging Machines.

De Brouwer Charging and Discharging Machines.

Feld Vertical Centrifugal Scrubbers.

Designed and Built to Suit Your Needs.

The **BARTLETT HAYWARD CO.**

Engineers and Founders

BALTIMORE **NEW YORK**

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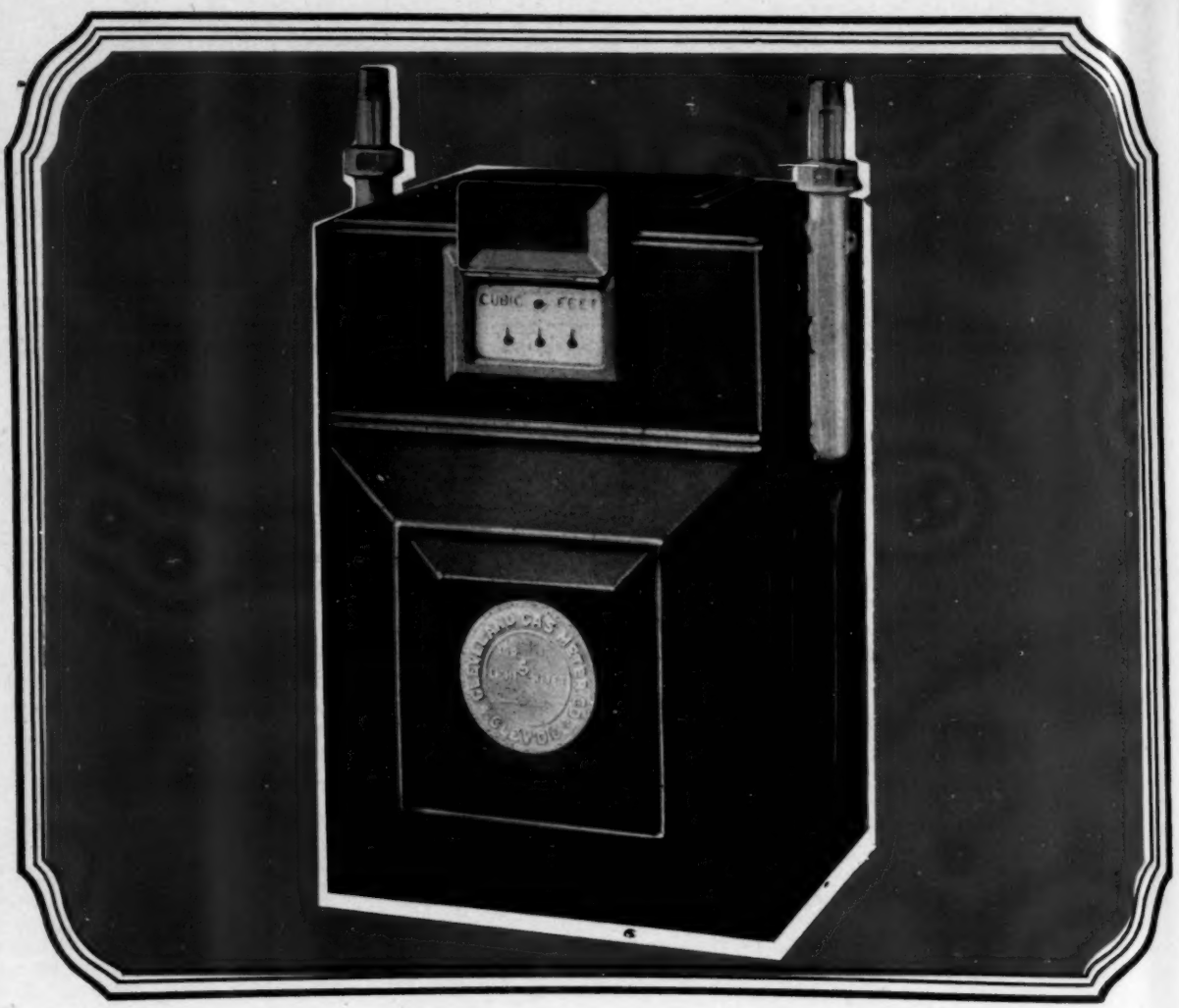


Dependability in a gas meter means a constant measure of reliable service; this is appreciated by the Superintendent, the Meter-reader and the Consumer.

Cleveland Gas Meters have a reputation for dependable service, the result of over thirty years' experience in manufacturing.

Our thoroughly organized and completely equipped factory assure you that the workmanship, materials, accuracy and general efficiency are unequaled.

"A" and "B" Types Meter Repairing

CLEVELAND GAS METER COMPANY

2180 East 65th Street **Cleveland, Ohio**

P. F. McENANEY, 85 Hancock St., Brooklyn, N. Y., Eastern Representative

AMERICAN
GAS JOURNAL

Vol. 121. No. 7 NEW YORK, AUGUST 16, 1924 Whole No. 3477

Selling Utility Securities Through the Employees

The details of an eminently successful preferred stock campaign

O. E. Wasser
Comptroller Associated Gas and Electric Companies, Ithaca, New York

THIS is the story of a unique customer ownership campaign, unique in that no one was especially employed to carry on any phase of the work. All of the stock was sold by employees whose regular duties were other than selling securities; the conduct of the campaign, the preparation of the advertising, letters to customers and employees, etc., being handled by members of our own organization, none of whom are regularly engaged in that class of work. As a matter of fact, we have no salesmen as such. The result was that the cost of selling the stock averaged but $1.30 per share ($50.00).

Why the Campaign Was a Success

These excellent results were possible only because

1. All employees were absolutely sold both on the company's securities and on the company and its policies. This, to my mind, is the most important factor in any customer ownership campaign.
2. The company stands well in the various communities in which it operates; there are no rate or other agitations.
3. The personnel is well thought of in the local communities, while the company always adopted a liberal policy so far as civic affairs were concerned, as well as toward its employees.

The Associated Gas and Electric group comprises 21 operating gas, electric and railway companies furnishing service in five states. The present campaign, however, was carried on in New York State only, the properties therein serving the south central portion of that state (total population of 123,000) with 10,166 gas meters and 25,423 electric meters in use. The territory is scattered in 160 communities, comprising approximately 20 plants and offices, the employees per plant ranging from 2 to 110. The total employees are somewhat in excess of 283, of which number 141 actually sold stock, although many more worked but failed to obtain subscriptions. The plants come under the jurisdiction of 13 superintendents. The present campaign was inaugurated in the last week of October, 1923, and up to May 1, 1924, over 22,000 shares of stock were sold to 3,337 consumers.

Educating Employees

Before the actual selling of stock commenced a brief educational campaign was carried out by means of a series of letters intended to be informative. These letters explained simple terms, such as "What Is Preferred Stock?", "What Are Holding Companies?", and gave general information about our companies, etc., etc. All such letters were mailed under two-cent postage direct to the employee's home. These letters proved very helpful and the knowledge displayed by the members of the organization showed that they had been carefully read and studied.

These letters were of necessity general only and did not give any details with respect to the financial statement, gross earnings, etc., of the company. It was felt that a little information along this line would do more harm than good, and that it would be better, when an investor requests balance sheet data, for example, for the employee to confess ignorance rather than to attempt to give information which may be inaccurate and misleading.

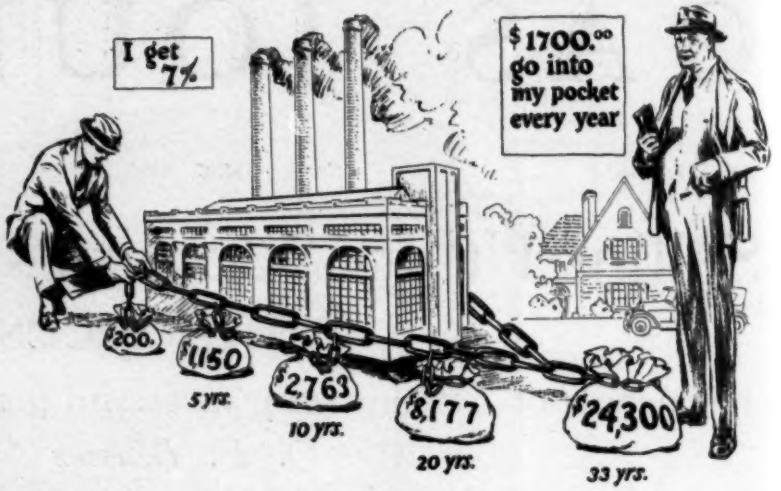
Who Makes the Best Salesmen?

Then, again, since the majority of subscribers are people not familiar with intricate financial details, an employee who has this knowledge is really unfit to be an effective salesman. Our experience shows that the poorest salesmen are those who know the most about investments, etc., because such employees cannot bring themselves to the point where they will or can talk in the language understood by the prospect; while our best salesmen are those who know very little about the company other than their own duties and the general policy of the management as evidenced by their treatment of him as an employee. This fact is brought out very forcibly when we consider that a meter reader at the Ithaca plant made the greatest number of sales in the present campaign; a gas fitter at the Norwich plant came

Safety and a Good Yield

You will not believe this at first, but it is true. If you save $200 a year and invest it at 7% you will have $1,150 in five years and $2,763 in ten years. And furthermore, you need not be rich; if you are just an average man, you can be worth $19,000 in 30 years and $24,000 in 33 years and live on the interest from it thereafter.

The average American family has an income between $1,200 and $2,500 a year. You should save at least 10% of your income.



next, a general utility man at Richfield Springs next and the superintendent of the Liberty plant was fourth.

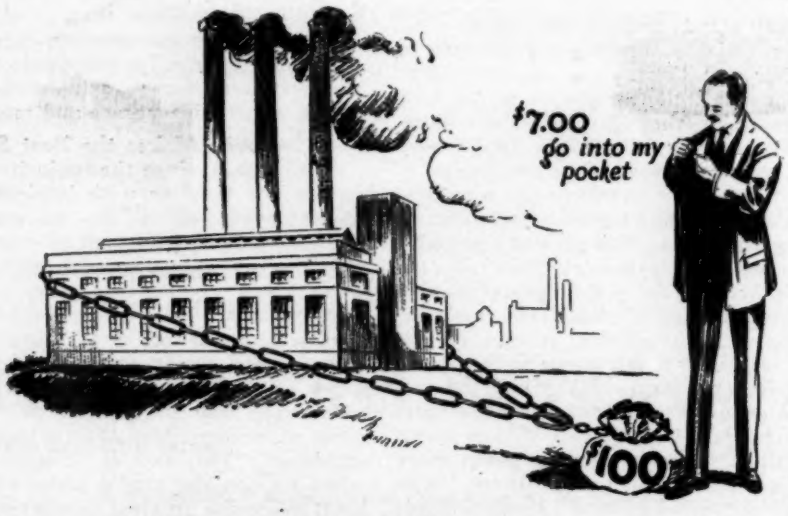
The foregoing statement does not in any sense belittle the intelligence of our consumers. It is a simple statement of fact, however, borne out by experience, that a man may be a good business or professional man or an excellent employee and still know very little about securities. As a matter of fact, a good shoe dealer recently told the writer that he "received his gas and electric bond" in referring to his preferred stock certificate.

When a member of our organization approaches a prospect who knows securities and can talk and understand financial terms, arrangements are made to have someone familiar with the company's structure, earnings, etc., call on such prospect and furnish him with the information he desires.

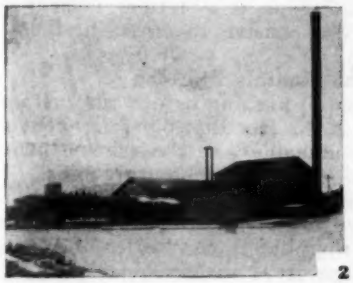
Employees' Meetings

At the beginning of the early part of October, meetings of the employees were held on the properties, every employee being asked to make a special effort to attend. The meeting was preceded by a banquet (at the company's expense), after which the employees were addressed by the writer and by one of the Ithaca employees who had been unusually successful in the 1922 campaign.

At this meeting advertising literature, application books, etc., were distributed. The talk was devoted quite largely to the idea of selling the company to the employees, explaining the purposes for



Tie your savings to productive property.
7 per cent and safety.



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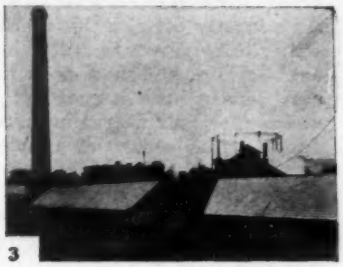

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General Office Building at Ithaca, N. Y.

(1) Occupied by the executive, auditing, engineering and operating departments, in charge of all Associated Gas & Electric properties. First and second floors occupied by local Ithaca Plant organization.

Oneonta Steam and Hydro-electric Plant

(2) Showing small part of lower dam. This plant connected with Sidney and Norwich Plants; also with hydro-electric and steam plants at Colliers and Hartwick.

1

Norwich Electric and Gas Plants

(3) Buildings in foreground coal sheds. Electric and gas plants in rear.

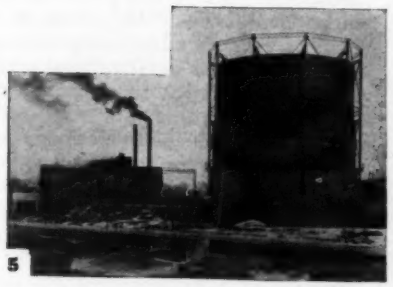
Ithaca Gas Plant

(4) Coal shed to left; plant at right. Holders in rear. Purification buildings, warehouses, garages, plant office, etc., in rear of plant.

Oneonta Gas Plant

(5) Distributing holder at right; relief holder in rear. Plant at left in rear.

4



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which the money was to be used and describing prizes, commissions, etc., which would be paid, and various other matters of general interest.

Before each meeting was held, the editors of the newspapers, as well as the bankers in that particular community, were called upon, the former being furnished with reading notices and a statement of the company's plans, while financial and other statements were submitted to the latter, as well as detailed information of the company's plans, hopes and expectations, which at the same time expressed the hope of co-operative assistance from both.

Maintaining Enthusiasm

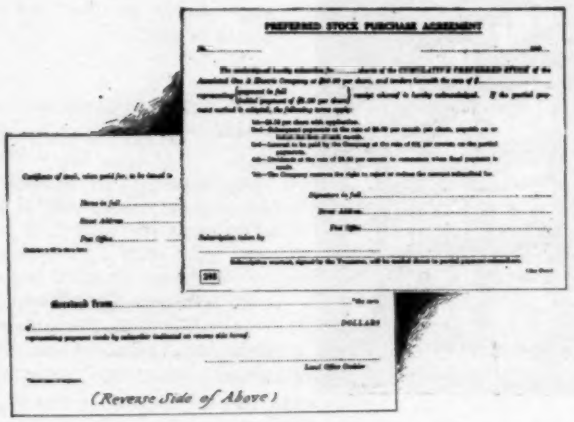
After the first banquet and meeting, the enthusiasm of the employees was kept up by visits of general office employees from time to time to the properties, talks with individuals, to groups and departments, straightening out difficulties, assisting in closing sales, etc. We found this method very helpful, indeed, as it rejuvenated the spirits of the employees and stirred things up considerably.

During the campaign weekly letters were mailed to all employees, giving details of the progress of the campaign, sales made, selling hints, etc., these letters

being forwarded direct to each employee's home. As a matter of fact, this method of keeping in touch with the employee is still being followed at the present time, although not on a weekly basis. We periodically furnish each employee with extracts of newspaper and magazine articles on the subject of public utility securities as investments, booklets and other advertising literature issued by banking houses. In this connection it must be pointed out that the co-operation of banking houses in furthering customer ownership activities is certainly most commendable.

Advertising

A series of three newspaper advertisements only was used by us during the entire campaign. The first one announced the opening of the campaign and was published immediately after the meeting in each community, the second one following a month later



and the third a month after the second. Our experience during the 1922 campaign convinced us that local newspaper advertising was not the best scheme for bringing the security to the attention of our customers, and we accordingly devoted our expenditures to circularization.

The day after each meeting a letter was mailed to every customer in the territory served by the company, this letter going out under 2c postage and having every appearance of a personal communication. With each letter a stamped return postal card was included, together with a copy of a circular entitled, "Have You Ever Received 7% on $50.00?" The direct results from these postal cards were remarkable, sales aggregating almost 300 shares being made on the cards themselves, while hundreds of additional shares were disposed of as a result of leads obtained therefrom.

The Letter System Proved Best

A second letter was mailed two weeks after the opening of the campaign and a third one a week or ten days before Christmas. (We might state in this connection that actual results accomplished from the Christmas letter were very unsatisfactory. As a matter of fact, we found the month of December the poorest month, with January the best.) Our experience convinces us that the proper method in which to reach our people is by letters, even though this may be more expensive so far as first cost is concerned.

The Monthly Bill Idea

A unique method of keeping before our customers month after month the fact that our 7 per cent preferred stock is obtainable was the scheme inaugurated in connection with our monthly bills. This consisted of an extra stub on the left-hand side which was utilized for advertising purposes, as was also the back of the bill. A new series of advertising has been inaugurated, so that each month a different view of an office building, a power plant or a gas plant (representing "back of the investment" phase) will be shown.

With each dividend check, also, is mailed a copy of so-called "talk," which has proven very interesting, indeed. As a matter of fact, numerous requests from stockholders have been received from time to time for complete sets of these "talks," either for their own use or for distribution among their friends.

Territory

The territory in each community was unrestricted. The employee bringing in the signed agreement received the commission, even though the subscriber might possibly have been seen by someone else. This arrangement worked out most satisfactorily and was an improvement over the "prospect" and "team" system in vogue in the previous campaign. Each employee, under this plan, was in business for himself and working for both commissions and prizes.

The territory was worked most thoroughly; in fact, the campaign had to be discontinued in several of the communities because the activity of the employees reached the point where the customers were annoyed and complained. A lady told the writer that nine different employees called on her in three months.

Commissions and Prizes

Commissions of $1.00 per $50.00 share are now being paid, while during the active part of the campaign weekly prizes for (1) greatest number of shares sold and (2) greatest number of persons sold, were given. The number of prizes ran as high as 15 per week, although the amount of money involved in any one period was small except during the January 1-15 period, when first prizes of $100.00, second of $75.00, third of $50.00, and fourth of $25.00 were offered in addition to a number of $15.00 and $10.00 prizes. The sales made during this period were remarkable. The writer is convinced that the use of prizes to stimulate the campaign is excellent and that the money spent in connection therewith is a good investment.

Competition Between Plants

Each plant was treated as a unit by itself, competition being worked up between the various plants,

(1) For the greatest amount of stock sold, and

(2) For the greatest proportion of the quota sold.

Quotas were assigned to each plant, the percentage of the quota sold proving more of a competitive fac-

(Continued on page 752)

The Gas Fired Hotel Range

How a good business was built up in Rochester, Minn.

R. C. Beebe

Southern Minnesota Gas and Electric Company, Rochester, Minnesota

IN COVERING the topic given above, the writer will not attempt to show that the installations of hotel ranges and other appliances in Rochester are in any way remarkable, or due to remarkable ability in our organization, but rather that the results reached have been gained by steady plugging, and a sincere belief that the service we were offering was the best that any one could offer for the work to be done.

Rochester is not a large city, the last census showing a population slightly under 14,000, but the Mayo Clinic and allied institutions bring large numbers of people every year, and these are accommodated by about thirty hotels, most of which serve meals. In addition to this list of prospects there are a number of large hospitals that do cooking in their large kitchens and diet kitchens.

History of Hotel Ranges in Rochester

The first installation of hotel ranges was made in Rochester about ten years ago, when four sections of range and one broiler were put in the State Hospital. These ranges are still in use, and have not been out of service at any time, and the expense for repairs has been very little. This installation was followed by three sections in the Damon Hotel, and then by four sections in the Colonial. In 1917 two sections were put in the pastry kitchen of St. Mary's Hospital.

In 1918, when the writer came to take charge of the plant, there were thirteen sections in use. There will not be space enough in this article to tell the details of each new addition, but we will try to show some of the general reasons why we have been able to increase this to forty-one sections in six years.

I recall very distinctly the first month I spent on the new job, and, among other things, I remember that our general manager called my attention to six coal ranges in the kitchen at St. Mary's Hospital that he wanted replaced with gas. We have succeeded in doing this, but, curiously enough, the installation is the last one we made. From the very first our attention was directed to installations of this type, and the results we have gained are the product of continued effort along that line.

The Inspection Plan

Very shortly after the writer reached Rochester we instituted the plan of giving our existing installations a monthly inspection at our expense. This has had the result of making the ranges function correctly at all times. This inspection has been very important as a good will builder, because our customers have felt that we were as much interested in the correct operation of the ranges as they were, and because they have never been without the use of their ranges on account of repairs. We selected our best fitter to do this work and very carefully trained him so that he could make needed repairs or adjustments to the burners and other parts. The management of the hotels was approached regularly and their attention was directed to the results being obtained by our customers who were using gas for cooking.

Gradually we were able to impress them with our sincerity, and when a new hotel was built in 1919-20 gas was the only fuel that was considered. All of the cooking in this ten-story modern hotel is done on six sections, and a double broiler, and the pastry work is done in a gas-fired oven.

Advantages of Gas Ranges for Hotel Work

Generally speaking, there are five or possibly six reasons that will influence any one considering gas ranges for hotel work. They are:

First—Economy.
Second—Increase in kitchen efficiency.
Third—Convenience.
Fourth—Cleanliness.
Fifth—Reduction of kitchen temperature.
Sixth—Smaller space occupied.

Economy

Under this heading comes the actual cost of the fuel needed to cook each meal, and this must be shown to be reasonable after making due allowance for the advantages of gas fuel that any one will admit. In Rochester this cost runs from four-tenths of a cent up to one and a half cents per meal, the variation being due the difference in volume. This heading also covers repairs, which are very high with coal equipment, and very low with gas equipment. Not more than $100 was spent last year for repairs to the forty-one ranges in service in Rochester.

Increase in Kitchen Efficiency

This is due to the fact that no one is required to look after the fires and bring in the coal. Also the range is always ready for any kind of work at a moment's notice, and no time can be lost waiting for proper heats. The third, fourth and fifth reasons also contribute to this item.

Convenience and Cleanliness

With a gas range any kind of work can be done at any time by lighting or turning out burners.

This is very important in any kitchen, but especially so in Rochester, which is essentially a hospital city. There is no soot or smoke or ashes where gas is used, and no food is spoiled by any of these things.

Reduction of Kitchen Temperature

Where coal is used in the summer time, conditions in many hotel kitchens are almost intolerable. Good chefs are not easy to get, and appreciate good working conditions. No man or woman can do good work in a temperature above 100 degrees, and anything that can be done to hold the kitchen temperature down to a lower limit will result in a saving due to a smaller labor turnover and better work performed.

Smaller Space Occupied

This is not always important. However, many hotel kitchens are apparently an afterthought, and the kitchen is given such space as can be spared from the dining room and lobby. In these cases the use of gas ranges will add to the floor space that can be used to work around the ranges.

Advantage of Business to Gas Man

So far we have discussed the reasons that might influence a hotel man to use gas equipment in his kitchen. Now let me outline its advantage to the gas man. All of us want increased business if our rate schedule is satisfactory. This business can be secured, but probably cannot be secured except by a reduced rate. The rate that can be made will vary according to local conditions, and is a problem that manager or company must solve. Hotel range business is not all peak load, as the major portion of the preparation for a meal is done before time to serve that meal. With us the addition of hotel business has resulted in better operating conditions at our plant and an increase in our sales per meter. In 1918, with 1,546 meters in service, we sold 33,000 cubic feet of gas per meter for the year. In 1923, with 2,056 meters in service, we sold 37,500 cubic feet per meter.

The Portland Way

A Pacific coast city stages a Gas Range Week

By Special Correspondent

A SPECIAL section of the Portland Oregonian, published in Portland, Oregon, is at hand. Its front page is a full-page illustration in colors of gas generators in the Portland Gas & Coke Company's beautiful plant in the Rose City.

The section is replete with intensely interesting information in regard to gas. The articles, many of them, are along scientific lines, and yet they are couched in language that the average reader can understand.

Papers from other cities have come to hand showing efforts made during the National Gas Range Week, but when a city of less than 300,000 people can produce an eight-page gas section filled with gas talk along instructive and educational lines it is a feat well worth being proud of, not only for the company, but for the city possessing such a company. The occasion was National Gas Range Week, although on account of climatic conditions the date was put a little later than elsewhere on the coast.

It is noticeable that the Portland people confined their National Gas Range Week to gas ranges exclusively and concentrated all their efforts on that appliance, leaving the tank heaters to a separate effort.

The Headings of the Articles

The following are the headings of the articles, which give a very thorough idea of the interesting information published:

"Modern Gas Equipment Is Used in Portland Hotel—Quick Heat Essential to Give Food Brown, Crisp Appearance and Delicious Flavor."

"Functions of Gas Holders Are Said to Make Possible Reliable Service—Tanks Store Up Product During Slack Hours and Release It During Rush or Peak Loads—Danger of Explosion Does Not Exist, for They Actually Float in Water."

"Improvements Cost Gas Company $1,346,170.60—Largest Single Item Is $400,000 for New Plant to Provide for Manufacture of Benzol—1923 Work Listed."

"Development of Gas Water Heaters Is Said to Have Been Really Rapid—From First Use of Fuel for Lighting, Then for Cooking Purposes, Use Has Been Extended to Other Ends, Particularly Since It Has Become Cheaper."

"Portland Gas & Coke Co. Began as Partnership in '59—Original Concern Manufactured Coal Gas With Six Small Retorts and Small Holder."

"Cooking Now Based on Scientifically Correct Data; Good Results Obtained—Several New Installations Made by Gas Company in New School Buildings—Modern Equipment Is Conducive to Good Cooking—Practical Experience Obtained in Class Room."

"Storage Systems Brought by Gas-Fired Appliances—Home Builders' Problem of Getting Supply of Hot Water Has Now Been Solved."

"Home Economics School Training Efficient—Fifty Schools Have Food Laboratories and Sewing Rooms."

"Daily Cleaning of Stove Is Held Essential—Task Just as Necessary as Tidying of Living Room."

"Gas Conservation Keeps Cooking Bills Low—Daily Savings in Month Enough to Buy New Cooking Utensils."

"Automatic Gas Range Makes Day Easy One for Housewife and Cook—By Properly Setting Thermostat Dial She Can Even Go Away in the Morning and Come Back in Evening to Find Meal Done and Ready to Be Served."

(Continued on page 752)

INDUSTRIAL GAS LESSONS

IF IT'S DONE WITH HEAT — YOU CAN DO IT BETTER WITH GAS

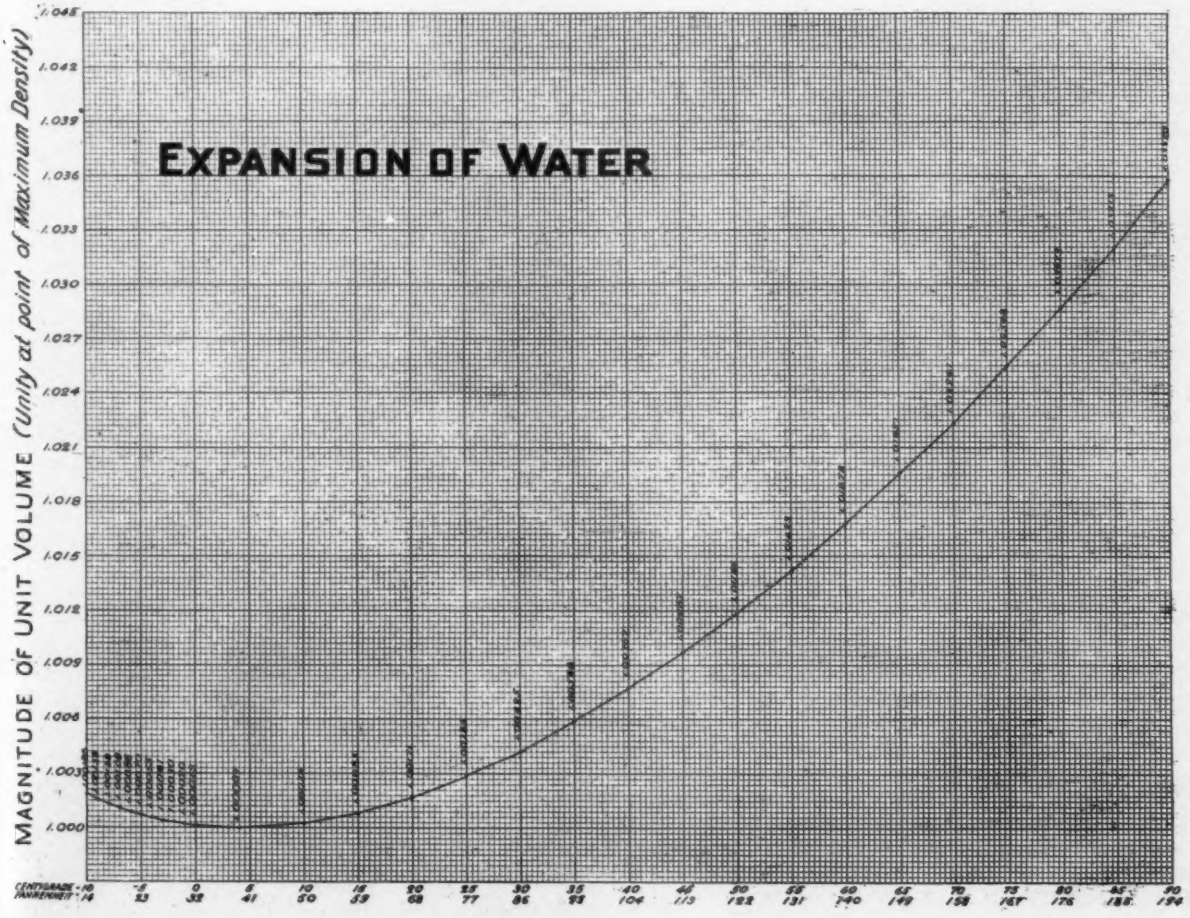
Lesson No. 33

Expansion Effect of Heat (continued)

The Effect of Heat on Water

Of all the liquids that are known, none is of such importance as water, as far as the effect of heat on it is concerned. The case of water is important, not only because of the inherent importance of the liquid itself, because water is irregular in behavior when subjected to changes in temperature.

Water is an exception to the rule of expansion, as it attains a point of maximum density at a temperature of 4 degrees C. Below and above that point the density of water is less than unity. This simply means that while water obeys the general rule of expansion above the temperature of 4 degrees C., or 39.1 degrees F. in expanding as the temperature increases, it behaves directly contrary to the general rule in expanding instead of contracting, as would be expected, as the temperature decreases below 4 degrees C., or 39.1 degrees F. In other words, water weighs approximately 62.5 pounds per square foot at a temperature of 39.1 de-



grees F., but its weight either above that temperature or below the same is less, dependent on the temperature differential.

The following table shows the variation in the volume of water as the temperature varies from the point of maximum density to the boiling point:

Expansion of Water

Degrees C.	Degrees F.	Magnitude of Unit Volume (Unity at point of maximum density)
—10	14	1.00186
— 9	15.8	1.00158
— 8	17.6	1.00132
— 7	19.4	1.00109
— 6	21.2	1.00088
— 5	23.0	1.00070
— 4	24.8	1.00055
— 3	26.6	1.00041
— 2	28.4	1.00030
— 1	30.2	1.00020
0	32.0	1.00013
+ 1	33.8	1.00007
2	35.6	1.00003
3	37.4	1.00001
4	39.1	1.00000
5	41	1.00001
10	50	1.00025
15	59	1.00083
20	68	1.00171
25	77	1.00286
30	86	1.00425
35	95	1.00586
40	104	1.00767
45	113	1.00967
50	122	1.01186
55	131	1.01423
60	140	1.01678
65	149	1.01951
70	158	1.02241
75	167	1.02548
80	176	1.02872
85	185	1.03213
90	194	1.03570
95	203	1.03943
100	212	1.04332

THE PORTLAND WAY

(Continued from page 750)

"Double Shell Type Oil Gas Apparatus Used—Higher Temperature Methods Mark Stride in Industry."

"Gas-Fired Coffee Roasters Installed in Plant of Clossett & Devers Here—450,000,000 Cups of Coffee or 75,000 Bags Consumed in Portland and at Interior Points in One Year Is Result of Enterprise of Local Firms Who Both Roast and Wholesale Product."

SELLING UTILITY SECURITIES THROUGH THE EMPLOYEES

(Continued from page 748)

tor than did the number of shares actually disposed of. The quotas were determined by taking into consideration, the sales made in the previous campaign, the population, the number of customers, the number of employees, etc.

Forms

We adopted the simplest form of purchase agreement we could devise and have but one form for cash sales, partial payment sales, exchanges, etc. It is, in fact, the only form handled by the employee selling stock.

It is extremely important that the number of forms handled by the employee be reduced to the lowest possible minimum since the average employee selling stock is not an accountant, and complicated and involved forms only cause discouragement.

Conclusion

A large proportion of our employees are shareholders, while many are now paying for stock on the partial payment plan. This fact serves to make the already pleasant relations between the employees and the company still more pleasant, and to cement the activities of both to the accomplishment of a common purpose—the success of the company and the consequent growth of each employee in the industry. We have a wonderful organization and are justly proud of the men and women who keep the wheels turning.

It is only because our employees have complete and absolute confidence in the management, in the company and its securities, and because we are all a great big family, that the exceptional and unusual results which we accomplished in our campaign so far were possible.

Summary

Total population	123,000
Total meters, Gas	10,166
Electric	25,423
Total employees	283
Employees selling stock	141
Total shareholders	3,337
Shares sold	22,000
* * *	
Average holdings per shareholder	6.6 shares ($330)
Average sale per employee	7.8 shares ($390)
Average sale per worker	15.6 shares ($780)
% shareholders to meters	9.39
% shareholders to population	2.71
Shareholders per M. population	27.1
* * *	
Shares subscribed for by employees	2,123
Employee stockholders	191
Average holding (shares)	11.1
% employee shareholders	68
Average cost of selling stock (per share)	$1.30

As The Journal Views It

SQUARE DEAL FOR PUBLIC UTILITIES

The public utilities, particularly the gas utility, have received in past years so much abuse, not only from the public itself, but from editorial writers in newspapers and journals, that it is still with a great deal of satisfaction and interest that an editorial comment presenting the case of the public utilities in the proper light is viewed It is not that at the present time such editorials are exceptional, for a great majority of newspaper editors have come to realize the value of public utilities in the communities that they serve, and have seen to it that justice is done the utilities in editorial comment.

But there still remains in some sections of the country decided prejudice against public utilities, and such editors who feel inclined to take it out on the gas companies and the other utility organizations, for no particular reason except that they form a good object at which to throw their missiles, should take counsel from the manner in which the city of Chicago, as represented in one of its largest newspapers, the Chicago Daily News, expresses its appreciation of the public utilities that serve the Metropolis of the West.

The editorial which follows is given in full, for it is certainly an indication of the marked change from what used to be the prevalent opinion about utilities after the World War. It certainly shows that the utilities in Chicago, and particularly the gas utility, are making great efforts successfully to educate the people to the real value of the service that they receive and to convince them of the fact that the public utilities of Chicago are important public servants and, as such, deserve commendation for good work as much as deprecatory criticism for work ill done. So the Chicago Daily News says:

"In the financial columns of The Daily News attention has been directed repeatedly of late to the remarkable change in the attitude of the investing public toward the securities of public utility corporations. This change is not local, but national. Economic writers everywhere are discussing its causes and its exact significance.

"To be sure, the abundance of capital available for investment has simplified the problem of refunding obligations that bear high interest rates and has facilitated the financing of improvements and extensions of the utilities. But this does not wholly account for the change. Legislatures and state utility commissions have modified their policy toward public utility corporations and are disposed, as a rule, to treat them with fairness. Where confiscation of moderate earnings has been threatened or attempted by stupid or designing politicians, the courts have intervened and accorded the utilities adequate protection.

"Moreover, after a decade of uncertainty and litigation the courts, Federal and state, have developed a tolerably consistent and clear body of principles applicable to utility rates, services and valuations. Confusing diversity has been replaced by substantial uniformity. The utilities know what to expect and the investors know how much protection and of what sort they may count on receiving.

"Finally, another factor, and one of increasing importance from every point of view, has been the excellent idea of 'customer ownership' and employee ownership. Strangly enough, what is called customer ownership is only a decade old. In Chicago its growth has been more rapid than in many other quarters, but it will spread faster when its basic principles and wholesome effects are more generally understood. Customer and employee ownership of utility securities means, essentially, that many persons otherwise directly concerned in the sound management and stability of the utilities have invested money in them. There are many good reasons why persons who use gas, electricity, telephone or transportation facilities should buy the securities of ably managed companies that sell those essential services to them. The employees of such companies, likewise, should be part owners of them and thus have a voice in their management.

"In such circumstances purely political assaults on utilities are not likely to enlist much public support. Lawmakers and administrative regulators find the

atmosphere unfavorable for arbitrary, oppressive or reckless measures. On the other hand, the short-sighted and greedy element in utilities management finds its occupation gone and its policies decidedly unpopular.

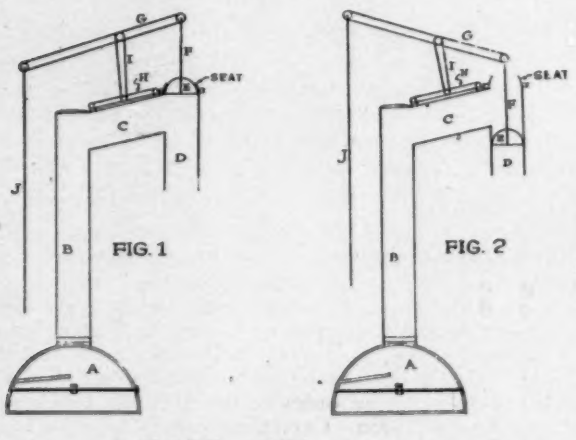
"There are profitable lessons in the altered public utility situation for the carriers of interstate commerce and for Congress."

AN APPARATUS FOR THE PREVENTION OF STAND PIPE STOPPAGES

J. S. Rider, Gadsden, Ala.

The apparatus consists of a cast iron ball E as shown in sketch which ball is operated by rod F, lever G and rod J (rod J leading to reaching distance of ground floor) lever bearing I and H is bolted to lugs that formerly held bridge cap down.

Fig. 1 shows ball seated into an inverted ball seat which seat takes the place of former bridge cap, and is position of ball when gas make is on. When coke is to be drawn and fresh charge of coal made, rod J is pushed up which lowers ball E as shown in Fig 2, which also opens bridge pipe to air, as well as plugs



Two Way Ball Valve for Bridge and Dip Pipes

off dip pipe, keeping air from getting into hydraulic main and also preventing gas escaping from hydraulic main. Stand pipe B and bridge pipe C acts as a chimney and burns clean while drawing and charging. When charge is made retort door closed, rod J is again pulled down as in Fig. 1.

Owing to the necessity of carrying high heats to secure the maximum yield capacity, etc., no later than the instant a retort is charged with coal, the breaking down of hydrocarbons and the formation of carbon begin, the carbon, together with heavy tar vapors, clings to the walls of stand pipe, reducing the capacity of the same and, of course, if not removed, will ultimately completely close it up. Therefore, a certain portion of the time is consumed in freeing the stand pipe of this carbon deposit. By the use of the attachment referred to above, the cleaning of the stand pipe is done at a time when there is no make on, or while the coke is being drawn and a fresh charge of coal put into the retort, which time, of course, is ordinarily wasted. Therefore, the plant capacity is perceptibly increased, as well as much time and hard labor ordinarily required to keep the stand pipe clean are eliminated.

Early in January of this year the writer equipped the Gadsden, Ala., gas plant with the two-way ball valves, hoping to eliminate stand pipe stoppages. We have not only eliminated stand pipe stoppages, but have very materially increased the gas yield, which we attribute to the fact that we are able to discontinue carrying seal in the hydraulic main, thereby eliminating the pulsative movement of the gas in the retort, thereby lessening the time contact of gas on the hot crown of the retort, and the ultimate production of retort carbon and perhaps naphthaline. The stand pipes remain clean at all times. The back pressure is eliminated on the retorts, which would have the same effect, and possibly more so, than that of the seal in hydraulic main.

With the exception of two or three of our retorts, which are very leaky, we find that the burning of the stand pipe at charging time is ample, and when an indication of stoppage is noticed, the valve is reversed a few minutes before the coke is to be drawn, thereby prolonging the cleaning period, which operation is so easy and simple that stokers will not neglect this very important task.

EQUITY RATES FOR GAS

The business of serving gas, if it can be called a business, is entirely different from the ordinary merchandising business. The usual business has a fairly well fixed turnover and it is possible to put a price on the commodity to cover cost, selling expenses and profit. These prices usually change with changing conditions. Even the prices on eggs vary considerably.

Any public service company, but particularly a natural gas company, has a very large amount of money invested in plant, wells, etc., which must be ready at all times, day or night, to meet the slightest demand for gas service. A patron never thinks of the necessity of indicating his demand from day to day, or month to month. The gas company must always be ready to supply from one to one hundred thousand cubic feet of gas to each and every patron, should he suddenly decide that he needed gas. The great bulk of the natural gas company's expenses go on, regardless of whether you wish to use gas or not.

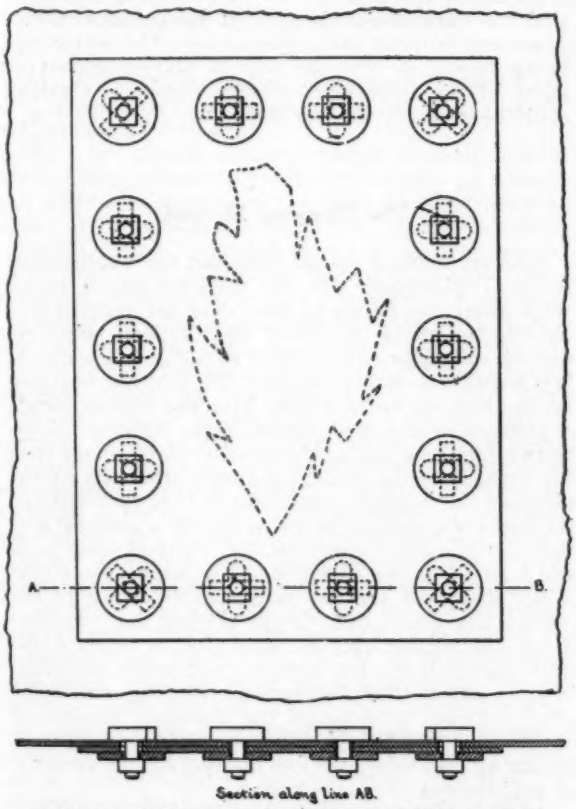
State Utility Commissioners in many states, who have the best opportunity to study such matters, agree that the Equity system of charging each and every patron a fixed sum monthly for service, and then a fair rate for the gas the patron uses individually, is the best and most equitable method for setting a gas rate. It is fair to both patron and the gas company.

Catechism of Central Station Gas Engineering in the United States

Installment No. 33

(Continued from last week)

Ans. Although the finished work would be the same in every case, the temporary measures adopted to prevent loss of gas while the perliminary work of preparation was being carried on would depend upon the location and character of the hole to be patched. If this is in the crown a plate smeared with clay or putty of some kind can be laid over the opening and



COMPLETED PATCH OVER RAGGED HOLE IN HOLDER SHEET TOO THIN TO TAP.

weighted down. If the hole is in the side of the holder and is small, it can be stopped with waste, but if large it may be necessary to keep it under water until the patch is ready to be applied.

Metal Used in Patch

This patch should be made of wrought iron or steel plate of about the same weight as the holder sheet, the piece taken being cut of such size and shape as to extend well beyond the edges of the hole on all sides. Oblong holes, say, 1 in. long by 5/16 in. wide, with the long axis at right angles to the edge of the plate, about 2 in. apart and with ½ in. space between the outer ends of the holes and the edge of the plate, should be made all around the perimeter of the patch. The heads of a sufficient number of ¼ in. bolts should be flattened until they are only ¼ in. wide. The patch should then be applied to, and held against, the sheet over the whole until bolt holes are made in the sheet to correspond with those in two diagonally opposite corners of the patch. This can then be bolted temporarily to the sheet by passing the flattened head of one of the prepared bolts through each hole, giving the bolt a quarter turn so as to bring the head at right angles to the hole, placing a washer over the end of the bolt and screwing down the nut. (A string should be tied to the bolt in order to hold it while the nut is being screwed on.) Putty can then be smeared around the edge of the patch to stop the escape of gas and the work of making the other holes in the sheet proceeded with. These holes can be made by means of a breast drill and a round file, or in any other convenient way that will not bend in the sheet around the edges of them, and as each one is made it can be stopped with waste. When the holes are all made the patch should be unbolted and removed, another piece of iron being pressed against the opening to prevent the escape of gas, and a putty made of equal parts of red lead and litharge mixed in glycerine spread over the side that goes against the holder. It is then re-applied to the holder and bolted on permanently, the hole around each bolt being filled in with putty before the washer is put on and a grummet of lamp wick smeared in the putty being used under both the washer and the nut. The washers used should not be less than 1¼ in. in diameter, in order to lap over the hole in its longest dimension. Care must be taken to use bolts on which the nuts turn easily, so that there will be no trouble from the nut and bolt turning together before the nut comes down tight on the patch.

If the patch is a large one applied to the side of the holder it will be well to provide some means of holding it up until it is held by the bolts. This can be done by an eye bolt fastened by nuts on each side of the plate, the eye and the piece of the bolt projecting beyond the outside nut being sawed off when the job is finished.

Removing Naphthalene from Inlet Pipes of Gas Holders

183. Describe some method by which accumulations of naphthalene may be completely removed from the inlet pipes of gas holders.

. Ans. Accumulations of naphthalene in the inlet pipes of gas holders occur most frequently in that portion of the pipe which passes down under the tank wall and up inside the holder. When the naphthalene exists in the pipe as a flocculent lining of approximately uniform thickness throughout a large portion of its length, it can be removed by charging the gas with the vapor of light naphtha, gas so charged being able to pick up naphthalene deposited in the form of loose crystals. The gas can be charged with the vapor either by injecting the naphtha into the inlet pipe in the form of a spray by means of a steam jet, or by filling the drip at the bottom of the pipe with naphtha, which gradually evaporates into the gas passing over it. Naphthalene in the condition named can also be removed by blowing steam into the pipe in sufficient quantity to raise the temperature to the point at which the naphthalene will either melt and run down into the drip, from which it can be pumped out, or vaporize and be taken up by the gas. In all of these methods it is necessary to have gas flowing through the pipes so that the naphthalene as it is vaporized will be picked up by the gas and carried along with it out of the pipe, and there is always danger that the naphthalene so picked up will be again deposited at an inconvenient point during the further travel of the gas. When naphtha vapor is employed this will condense at the same time that the naphthalene is deposited, dissolve the latter and carry it along to the nearest drip, thus preventing any obstruction, but when steam is used the liability is great that the obstruction will be merely transferred from one point of the pipe system to another.

Formation of Naphthalene

In many cases the presence of naphthalene is not suspected until it has formed, on the inside of the portion of the pipe which rises through the water in the tank, a layer of such thickness that it is detached from the sides of the pipe by its own weight, and falls into the elbow making the turn from the vertical into the horizontal part running under the tank wall, where it forms a compact mass. Such a mass seems to be very little affected by either naphtha vapor or steam, and must be washed out either with hot water or with naphtha in the liquid form. Hot water may be used in several ways. At one works, the water was heated by means of steam in an old boiler equipped for the purpose, the pressure being run up to between 30 and 40 pounds per square inch, and was conducted to the holder by a temporary line of pipe. The operation of cleaning out the holder inlet was carried on as follows: The holder was practically emptied of gas and kept as long as possible, the time chosen being that when the stock of gas was small enough to be contained in the other holders, though this was merely to keep the weight of pipe to be handled at a minimum, as the holder could be raised through the outlet pipe without interfering with the work. Through a hole drilled in the top of the bonnet over the inlet pipe was inserted a one-inch pipe on the bottom of which was screwed a 1 in. by ½ in. ell, the direction in which this ell pointed being marked on the pipe at the top. This pipe was made long enough at the start to reach down to the bottom of the holder inlet and a number of short pieces of pipe were provided to screw on as the holder rose. The pipe fitted loosely in the hole in the bonnet, but a practically gas-tight joint was made by wet cloths wound round the pipe at this point. The pipe was supported and turned by means of a bar handle clamped on at the proper height. A hose connection being made between this pipe and that from the hot water heater and the water being turned on, it issued from the opening in the ell in a jet which broke up and dissolved the naphthalene and ran down into the drip, from which it was pumped, bringing the naphthalene with it both in solution and in suspension. The drip pump was kept working all the time the water was being run in, so that the water should be pumped out before it cooled down and dropped the naphthalene. The water pipe being turned so that the stream played against all parts of the inlet pipe, a very complete cleaning could be given by this method.

The Plunging Method

Another method for washing out the naphthalene is called "plunging." In this the inlet pipe is sealed with water, the flange at the top of the vertical pipe outside the holder taken off and the drip pump removed. The pipe is then filled as full of hot water as it is possible to have it without filling up the horizontal run coming to the holder from the station meter. A plunger, or wooden cylinder about eighteen inches to two feet long and a little smaller in diameter than the pipe, fastened to a pipe handle, the axis of the pipe and the cylinder coinciding, is then inserted and worked up and down so as to impart a surging motion to the whole body of water. The surging back and forth of the water dislodges the naphthalene that is not dissolved and the large pieces rising to the surface are fished out, the remaining fine particles being pumped out with the water. It is rather a difficult matter to get the large body of water contained in pipes above 16 in. in diameter moving with sufficient velocity to dislodge the compact masses of naphthalene, but if the motion can be produced, "plunging" is a very effective method for the removal of naphthalene from the pipes.

Use of Water with Solvent

When naphtha or any other liquid solvent is used it is not economical to pour it into the pipe by itself, since, if this is done, it will cut channels in the deposit through which it will run to the drip before it is fully saturated with naphthalene. A better effect can be obtained by pouring water into the inlet until it is filled to halt its height. Then solvent naphtha in an amount suited to the size of the pipe is poured

in, and the water slowly pumped out of the drip, so that the liquid gradually falls in the main. The consequence is that the solvent, which forms a layer on the top of the water, is forced to act on the whole of the interior surface of the main, both where the latter is upright and where it is nearly horizontal. The time during which it acts on the surface is determined by the rate of pumping, and thus may be made sufficiently long to complete the solution of the naphthalene. When the solvent has reached the elbow, the rate of pumping is diminished in order to give it time to act on the greater horizontal section of the pipe which then becomes exposed to it. By this method of treatment the whole of the inner surface of the pipe is freed from naphthalene, which is completely removed from the main through the pump.

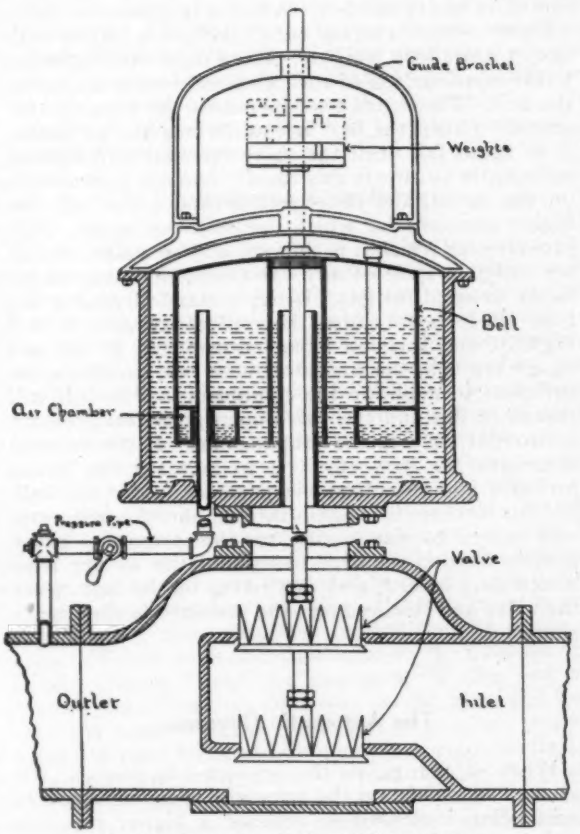
Description of Types of Governors

184. Give a description, illustrated by sketches, of a simple, non-automatic street main governor, and explain its action.

Ans. As usually made, simple non-automatic street main governors consist essentially of a cast iron valve box, inserted in the main leading from the outlet of the holders to the street mains and containing a double, balanced valve; a cast iron water tank placed vertically over the valve box, but not necessarily directly upon it; a bell made of sheet iron and similar to a small gas holder working in the tank, this bell being fastened to the valve rod so that as it rises or falls the valve moves with it; and a small gas pipe connecting the outlet from the valve box with the interior of the bell, which is thus always supplied with gas under outlet pressure. The form of these various parts and the manner in which they are combined vary in different styles of governors. Thus the valve may be conical, parabolic or cylindrical. When the latter form is used the side of the cylinder is pierced with V shaped openings placed with the points down. Whatever its shape it should be made so that the upward and downward pressures exerted upon it by the gas will be equal and so neutralize each other. The bell is made sometimes with an air chamber large enough to support by its buoyancy the combined weight of the valve, rod and bell, and sometimes without such an air chamber. In the latter case the weight of the bell, valve and rod is counterbalanced by removable iron weights carried on rods suitably attached to either levers or chains fastened to the bell.

The Non-Automatic Type

In the governor illustrated on the cut the valve is made cylindrical and is balanced by being made double and being set so that the pressure of the gas on both the inlet and outlet sides of the governor is exerted upward on one valve and downward on the other. The bell is provided with an air chamber of such size that, when the bell is in place in the tank and fastened to the valve rod and the tank is filled with water, the buoyancy of the bell will be sufficient to raise the valve and keep it pressed tightly against its seats. The valve rod after being fastened to the top of the bell is continued above it through a hole in a bracket bolted to the top of the tank, and is thus guided at the top. The same style of governor is made without this guide for the valve rod at the top, but in that case the bell must be guided by means of rollers fastened to the bottom and running in grooves in the sides of the water tank. Gas from the outlet side of the governor is brought under the bell by means of the small pipe shown on the cut, which is connected into the main on the outlet of the governor and passes up through the bottom of the water tank to a point above the water line inside of the bell. This pipe is provided with a stop cock. Between the valve box and the water tank is inserted a piece of flanged pipe, the length of which is made to suit local conditions, it being customary to have the valve placed in the basement or cellar under the governor room, while the tank and bell are on the ground floor.



NON-AUTOMATIC STREET MAIN GOVERNOR

Operation of Governor

When the governor is to be put into action, water is run into the air chamber at the bottom of the bell, through the pipe shown on the cut as connected into the air chamber, and brought up through the top of the ball, until the weight so added is sufficient to prevent the bell from being in equilibrium unless the pressure inside of it is equal to the minimum pressure that it is desired to carry at the outlet of the governor. The effect of the addition of this weight to the bell is to cause it to fall and so open the valve until the opening is large enough to permit gas to pass through in sufficient volume to maintain this minimum pressure on the outlet side of the valve and therefore under the bell. When it is desired to carry a higher pressure on the outlet the bell is loaded with one or more iron weights, placed on a shelf fastened to the continuation of the valve rod above the top of the bell. This extra load increases the pressure required to keep the bell in equilibrium and so causes it to again fall until the valve opening is increased sufficiently to supply gas rapidly enough to maintain on the outlet, and consequently under the bell, the higher pressure for which the governor is set. Any pressure for which it is thus set will be maintained at its outlet in spite of any variations that may occur in the demand for gas. If the demand increases, the first effect is to cause the outlet pressure to fall slightly, and this fall being transmitted to the gas under the bell, the pressure there will no longer be sufficient to maintain the equilibrium. The bell will therefore fall and the valve open until the pressure is brought back to the proper point. If the demand decreases the first effect is to increase the outlet pressure and therefore the pressure under the bell. By this increase it is again thrown out of equilibrium and caused to rise, owing to the pressure being greater than is required to balance the weight with which it is loaded, and this rising of the bell closes the valve and thus reduces the pressure to the proper point.

The Automatic Governor

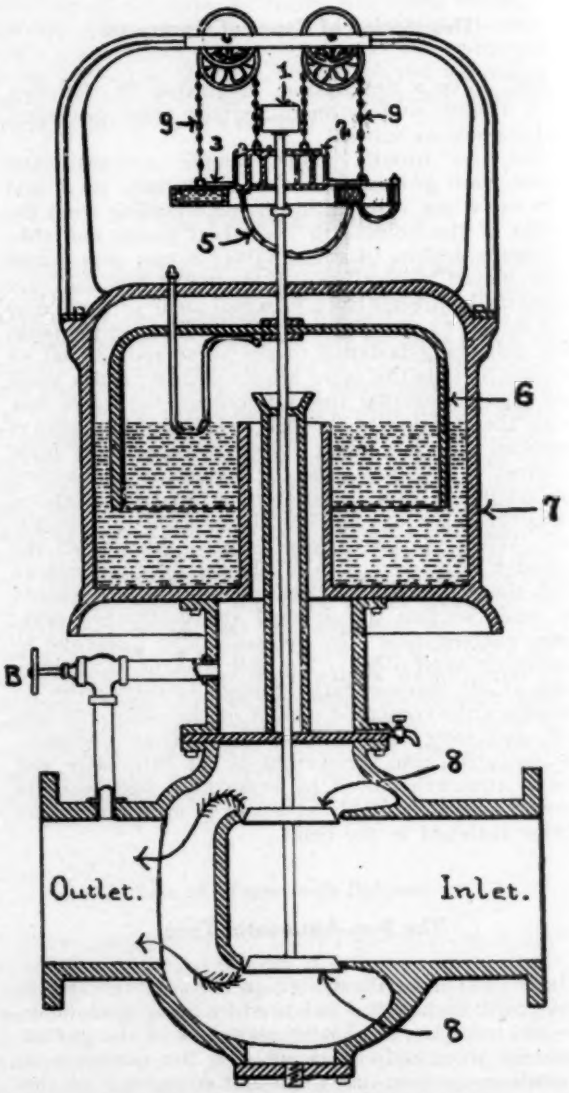
When a change in the pressure is desired, the amount of weight on the governor must be varied to suit, being increased to produce a higher pressure and decreased to give a lower pressure.

185. Give a description, illustrated with sketches, of some form of street main governor which is automatic in its action—that is, increases the pressure at its outlet as the demand for gas increases and decreases the pressure as the demand for gas falls off, and explain its action.

Ans. An automatic gas governor is one that will automatically establish and maintain predetermined pressures. The old style of balanced governor is capable of changing the volume of gas sent out while maintaining a uniform pressure at its outlet. Any desired change in the pressure, with this style of governor, is effected by adding or removing weights by hand. A perfect and automatic governor, for use in maintaining the supply of gas to a system of street mains, must change volume and pressure together, without manipulation, the pressure being maintained always somewhat in proportion to the volume of gas going out.

The Construction of the Apparatus

One form of automatic governor in successful operation is shown in the accompanying cut. It consists of a bell, 6, floating in a tank, 7, its interior being supplied with gas through a pipe and valve B, connected with the outlet of the governor, and subject to the pressure on the street mains at the governor outlet.



AUTOMATIC STREET MAIN GOVERNOR.

The Gas Meter

Paper read before the Gas Meter School, conducted by the Southern Gas Association at N. C. State College, N. C.

Charles Leach

Superintendent Macon, Ga., Gas Company

IT WOULD, perhaps, be more appropriate to open this week's work with a complete history of the invention and development of the gas meter and its development through research, experiment and evolution to its present state of perfection. However, it is not my purpose to dig into the past and its history will only be lightly touched upon for reference.

During the present week we are going to investigate the vitals of the volumetric instrument commonly known as the gas meter. Some of us know it intimately and have come here to learn more, and I venture to state that the more we know about it the more confidence we will have in it and the more we realize what a wonderful piece of machinery the gas meter is.

Wonderful? Yes! Wonderful because during nearly a century of manufacture and use the mechanical principle has remained identical.

Wonderful? Yes! Wonderful because day and night for years, without attention, it is on the job, watching the interests of the consumer and the gas company.

Wonderful? Yes! Wonderful because meters fifty and sixty years old are being repaired and put back into service again.

Wonderful? Yes! Wonderful because by its invention it made possible the practical commercialization of gas which has lightened the domestic load of millions of women, has given the luxury of abundant hot water without effort and is furthermore a great factor in our present-day industry.

Progress of the Meter

An ignorant person may claim that the gas industry has been slow; that expert mechanical engineering talent has not been directed toward developing a meter of smaller size without decreasing the capacity. Those of us who have been in the gas business many years remember such inventions with claims that the two diaphragm meter had been superseded. We remember the meter slightly larger than a man's fist, with the capacity of a five light. Where is it now?

The patent office records show large numbers of patents that have been taken out for instruments claiming to measure gas. Where are they being manufactured and what gas companies are using them?

What if Croll & Richards in 1844 had introduced a meter that was unreliable? Don't you suppose that in nearly a century it would have been superseded? We must realize that the principle, as invented, was absolutely correct and bears out the old adage—"The truth must prevail."

The truth! A gas meter tells the truth? I can imagine the smile of cynical doubt upon the faces of those who are not familiar with the gas meter as we are. I can hear the whispers of scorn from the ignorant. The reason there is a certain amount of doubt as to the integrity of a gas meter in the minds of the general public is the fact of their indifference to the amount consumed until the bill comes in. The public should be encouraged to read their meters to check against waste.

Reducing Complaints

A certain gas company in the South makes it a point on any industrial installation of importance to teach someone in the organization (usually a clerk in the office) to read the meter, and this person reports to the responsible official the consumption each day. By this system this company has been able to reduce the complaints of high bills on industrial installations to a minimum, and most of these consumers believe the meter tells the truth.

Some time ago a customer walked into a gas company's office and, presenting his bill to an official, remarked that he did not believe it possible that he could have used that much gas; the meter must be wrong. The official replied by asking the customer whether he had ever looked at his watch and, noting the time, had remarked, "Gee, I didn't know it was that late." The customer replied that he supposed he had, but what did that have to do with his gas bill? "Then," said the gas man, "if you can use more time than you think you should have and have a time meter stuck in your pocket, how can you expect to keep track of how much gas your family and servants use when you never read the gas meter and check up on them?"

We come now to the purpose for which we are meeting this week. We are meeting so that we may become better acquainted with this piece of machinery; that we may become more skilful in making the adjustments that are necessary to maintain the high standard of accuracy that has been attained; to learn to make certain tests so that companies we represent do not lose revenue by using meters that are defective or worn out.

Reliability of the Gas Meter

And last, but not least, we have come here to be convinced ourselves on the absolute truth and reliability of the gas meter, and our duty does not end when this result has been achieved.

Let us go back to our companies resolved that we will do the utmost toward making our fellow employees and the public as confident of the meter as we are. It is not possible that every employee of a gas company should know a meter as we do. A harassed official with a high bill complaint on his hands may ask you the question, "Does a meter sometimes for some reason or other run fast?" Or a salesman may be in doubt as to the accuracy of a meter after selling an appliance that is advertised to do a certain amount of work for a certain amount of gas, and it doesn't do it. These are the men you want to convince, the men who meet the public. Have patience with them, show them the four measuring compartments of a meter that do the same work, only automatically, as a bushel measure measuring flour. Tell them how long this type of meter has been in use, and there will be no question but that, if you are convinced yourself and have the proper enthusiasm in your work, that you can convince others as to the truth of the gas meter.

In saying that the principle of the gas meter had not been changed since its invention, I do not wish to convey the impression that it has not been improved upon. As a matter of fact, the manufacturers have kept well abreast with the times in the expansion of our industry. With the increased consumption per consumer, they have developed a meter with larger capacity without adding to the cost. They have materially strengthened the working parts and generally improved the design. Probably the most notable improvement in design is the change from the soldered inlet and outlet screws to the solid type. This improvement alone must save the various gas companies thousands of dollars a year in changing meters alone without taking into consideration the damage done to a meter while in transit to the shop and the expense of resoldering the screws. By the manufacturer's past performances we can be assured that whatever contingency arises in our business through change in gas manufacturing, processes or otherwise, their engineering ability and experience will enable them to handle the matter satisfactorily.

Head of the Meter Department

We now come to the man himself, who has charge of a gas company's meter department. On him depends one of the most important factors in the success of the company. He it is who is responsible for the company's receiving the proper amount of money for the gas delivered and also seeing that the customer is not overcharged for the gas he uses. He it is who must be so enthusiastic as to the truth of the gas meter that he can inspire confidence and enthusiasm in the other employees.

To meet these qualifications he must, first of all, be truthful. He must also be a man of character who will demand the truth from the men who are under him. He must set a high standard for good workmanship and accuracy and see that others live up to it. He must be forever vigilant that no careless work is being put into meters. He must insist on a good, clean, light shop that will inspire good and accurate work. And, finally, he must maintain the traditions of the master workmen who have spent their lives engaged in the meter business and brought it to the state of perfection wherein it has gained the confidence of government, state and city departments who have investigated its truth.

A word of appreciation should be spoken here of certain men of the industry who have given liberally their knowledge and time in research to contribute toward the technical literature of the gas meter. I refer particularly to the 1920 report of the committee on consumers' meters of the American Gas Association, of which Mr. Castor, of the United Gas Improvement Company, was chairman. We also owe a debt of gratitude to Mr. D. P. Allen for compiling the "Outlines of Instruction in the Testing and Repairing of Gas Meters," the book we are using in this course. Mr. Allen, in this book, has shown his complete mastery of the business and has written it in language we can all understand.

We are to be congratulated in the fact that the South is progressive enough to institute this course, the second in the United States, and we are proud that our companies are progressive enough to send their men here to attend it We are particularly fortunate in having Mr. Ben Wagner, of the United Gas Improvement Company, as our instructor. Mr. Wagner's experience as the inventor of a very successful prepayment attachment and the fact that he is responsible for a large meter repair shop that does not tolerate anything but perfect work place him at the top of his profession. If we do not acquire considerable knowledge from Mr. Wagner it will be our fault and not his.

CORRESPONDENCE

August 6, 1924.

Editor, American Gas Journal:

Dear Sir: I have read in your paper at different times statements regarding early endeavors by gas men to sell stock of their companies locally.

I began working for the gas company at Derby, Connecticut, in 1877, and I am certain that at that time the manager of the company, Mr. Charles H. Nettleton, worked "early and late and often" to sell stock of that company to local investors, and he did so well that the stock is now owned by the people he supplies with gas.

Yours truly,

HENRY S. WHIPPLE,
Manager.

Rockford Gas Light and Coke Co., Rockford, Ill.

How Women Can Help Promote Better Public Relations for Utilities

Purposes and suggestions for organization

Isabell Devie

Chairman of the Women's Public Information Committee, Middle West Division, N. E. L. A.

THE plan to organize the women who are directly connected with the public utilities as employees, was the outgrowth of a determination on the part of leaders of the industry to widen their contact with the public.

Each employee comes in contact with many people every day, either in the course of business duties or outside of office hours. Each person connected with the industry is, naturally, looked on by those on the outside, as a part of the public service company serving them. The public asks them questions about the business. If they are qualified to give intelligent answers, the veil of mystery with which some people surround the operation of the utilities would soon be removed.

Men Have Had Greater Opportunities

It is probable that men employees have had greater opportunity to learn more of the fundamental facts relating to the public service companies than the women have had. This on investigation has been found, invariably, to be true. Inquiries among the women employees of some companies developed the fact that none of them had ever been in the company's generating station or gas plant.

Mixed meetings of men and women are more than usually dominated by the men in the organization. The men read the papers, make the talks and lead the discussions. The women usually show some reticence about asking questions or offering their views in the presence of men to whom their questions might appear foolish. In these mixed meetings, the discussion frequently proceeds on the assumption that all present are familiar with certain fundamentals and the woman employee, who has not had the opportunity to learn of these fundamentals, finds herself increasingly in the dark as to what all the talk is about.

Movement Nation-Wide

This effort, therefore, to organize the women employees was undertaken as a regular department of the National Electric Light Association and is spreading to other utility industries.

Every effort is being made to extend the scope of the organization to include all utility companies, because the same reasons which make it advisable to extend the influence of women employees apply equally to all public utilities.

Purpose of the Organizations

The whole purpose of both men's and women's organizations is to carry to the public the essential features of the utility industry. This is necessary, because no other industry is more closely allied to the home and industrial life of the people, or so dependent on a clear understanding by the people. It is probable, also, that there is more widespread misunderstanding of the organization, operation and control of the public utilities than concerning any other class of business.

Plan of Organization

The national women's organization is merely for the purpose of rendering assistance in organizing local bodies and aiding in preparing courses of study. It exercises no control. There is no constitution or by-laws. Each local body of women arranges and runs its own affairs and proceeds as it wishes. It is not subject to supervision by any higher organization.

There is a national chairman, directing the larger aspects of the work and working through chairmen in the geographic divisions and state sections. The geographic division chairman, in turn, has state chairmen through whom she works, assisting and advising them in their work of organization and study.

Large and Small Utility Centers

In the larger centers of the utility industry there are sufficient numbers of women to form local bodies which can operate effectively. In smaller communities it may be advisable to effect an organization among women employees in groups of neighboring towns.

In other instances the organizations are effected by companies, if the latter operates over a territory consisting of more than one city. Meetings are held at centrally located points.

Local Organizations

Some of these local organizations include only women who are directly working for the utilities. Others include wives and other women in the families of employees. In some instances women outside of the industry, such as teachers and writers, have asked to be included in membership. Nearly all encourage their members to invite women guests who may be interested in the discussions.

What It Is All About

The local organization effected, the next thing is to determine what to do.

First, each woman should know just exactly why she is asked to join. It is probably elemental that the purpose is to pave the way for better public relations. The benefits of such relations with the public are mutual, being shared alike by the public, the

employee and the company which operates the utility. For it is only when the mystery is removed and the public understands some of the more intimate affairs of the service company that the best of service can be given. If there is antipathy, quarreling, bickering, constant nagging, the service suffers. When the service suffers the employee's position becomes more precarious.

Advantage to Company

The advantage to the company itself is apparent. It is taken for granted that one should be interested in her work. But it is not always the fault of the employee that she is not interested. The employee, in some instances, may have been given no encouragement to learn anything about the business with which she is connected, aside from the mere routine of her own position. Even though she may have made an effort to learn something besides answering the telephone, taking dictation, figuring bills, filing or doing other clerical work, her overtures in this direction often are given little encouragement.

But even if no such effort were made on her part it is plainly the duty of the management, or the department in charge of cultivating better public relations, to make the first advances and place at the disposal of women employees the opportunity of learning more about their business.

How to Proceed

The plan of organizing the women which is being followed by many companies is simple. A regular organization is perfected with officers and sometimes with by-laws or some form of rules.

The national and division chairmen are suggesting certain subjects for study and discussion. The subject decided on for a certain meeting or series of meetings having been selected, someone in the organization qualified to talk about it is asked to prepare a paper or deliver a talk on that subject. Discussion is then invited. Often in this connection it is advisable to set the stage, as it were, for the discussion, just as is frequently done in men's meetings.

Literature on the subject discussed is gathered. If enough copies of pamphlets and books pertaining to the subject are available, a copy is passed to each. Often it has been found advisable to have a follow-up meeting for the consideration of a subject discussed at a previous meeting, as naturally, after some reading and thought on the topic, new questions arise in the member's mind which she will want to have answered and explained.

Develop Women as Speakers

It must not be thought, however, that addresses, papers and discussions are to be confined to men members of the utilities who may have been brought to the meetings for that purpose. The aim is to develop the women in the organizations as speakers. Individual members of the local organizations should be encouraged to prepare papers for the meetings. They can nearly always find able assistance from the men in the utility companies. Subjects to be discussed or written about should be assigned in advance in order to give plenty of time for their preparation. Here again the Committee on Public Utility Information may be of assistance. They usually maintain files with articles, books and pamphlets on all manner of subjects dealing with the utilities.

Preparing Women for Active Communal Work

This step leads easily to the next, that of preparing women to take an active part in the club and civic affairs of their communities. Women's clubs, women's departments of Chambers of Commerce, and domestic science classes in the schools, usually prefer to have women speakers. Nearly all of them are anxious to have local speakers and are eager to learn of utility problems with which the women come into as intimate, if not more intimate, contact than the men.

Home Economics

Some companies are developing from the women's organizations special departments devoted to home economics subjects, with capable women demonstrators whose services are always at the disposal of customers. They demonstrate the economical use of electric light and power or gas service and explain new ways which these labor saving agencies can be used. They provide recipes, give demonstrations and are a splendid agency by which to interest the women more closely in the utility problems.

This, however, is an advanced step, useful to larger companies, but more frequently beyond the scope of the smaller organizations.

No utility company, however, which has any women employees is too small to avail itself of the influence of these women in building good public relations and keeping them.

No Mystery About Utilities

And in organizing a women's section particular attention should be paid at the outset to remove the impression from their minds that the affairs of a public utility are highly technical and not to be understood except by engineers and other technical men. The problems with which it is necessary to acquaint the public are comparatively simple and fundamental. They may be readily understood. They can be explained simply, so that anyone can grasp them. And, being understood, it is generally found that the study is so interesting that members of the organization make special efforts to increase their knowledge by conversation and discussion and reading, outside of meetings.

Utilities Need Women

With the increasingly influential part that women are taking in public life and business affairs it becomes necessary to pay proper attention to the cultivation of their kindly interest in the utilities. That this can best be done by the women who are part of the utility organizations is being recognized by leaders in the industry.

To make the work of the women properly effective the movement needs and must have the co-operation of all utility executives and the loyal participation of the women.

Current Market Prices

COALS (By Courtesy of Coal Age)

A. Bituminous.

(Spot prices, F. O. B., mines, net tons).

High Volatile, Eastern	Market	Price
Pool 54-64 (Gas Standard)	New York	$1.35 to $1.50
Pittsburgh screened gas	Pittsburgh	2.30 to 2.50
Pittsburgh gas, mine run	Pittsburgh	2.00 to 2.25
Kanawha lump	Columbus	2.00 to 2.25
Kanawha mine run	Columbus	1.30 to 1.55
West Virginia lump	Cincinnati	2.00 to 2.50
W. Virginia gas mine run	Cincinnati	1.35 to 1.60
Midwest		
Indiana 4th vein lump	Chicago	2.50 to 2.75
Indiana 4th vein mine run	Chicago	2.25 to 2.50
South and Southwest		
Big Seam lump	Birmingham	3.30 to 3.50
Big Seam mine run	Birmingham	1.50 to 2.00
Southeast Kentucky lump	Louisville	2.00 to 2.25
Southeast Kentucky mine run	Louisville	1.25 to 1.75

B. Anthracite.

(Spot prices F. O. B. mines, gross tons),

	Market	Freight rates	Independent	Company
Egg	New York	$2.34	$8.50 to $13.00	$8.00 to $8.35
Egg	Philadelphia	2.39	9.25 to 11.00	8.10 to 8.35
Egg	Chicago (net tons)	5.06	8.50 to 12.00	7.25 to 7.45

COKE (By Courtesy of Iron Trade Review).

Connellsville, furnace	$2.90 to $3.00
Wise County, furnace	3.75 to 4.50
Alabama, furnace	5.00 to 5.25
Foundry, Newark, N. J., del.	10.41
Foundry, Chicago, ovens	12.50
Foundry, Boston, delivered	12.00
Foundry, St. Louis	12.00
Foundry, Granite City, Ill.	9.00 to 9.50
Foundry, Alabama	5.75

PETROLEUM (By Courtesy of Oil, Paint & Drug Reporter)

(Prices at wells, per bbl.)

Pennsylvania—Ohio—West Virginia.	
Cabell, West Virginia	1.60
Corning, Ohio	1.90
Lima	2.08
Pennsylvania	3.00 to 3.25
Wooster, Ohio	1.90
Indiana—Illinois.	
Illinois	1.87
Indiana	1.88
Oklahoma—Kansas.	
Healdton	.90
Mid-continent (low gravity)	.90 to 1.05

* No quotation, due to strike.

Gulf Coast.

Gulf Coast, Grade A	$1.50 to $1.75
Gulf Coast, Grade B	1.30 to 1.45

GAS OILS.

Gas Oil, Bayonne, bulk gal.	5¼ to 6c
Gas Oil (32-36) Illinois-Indiana,	4.86 to 5.11
Gas Oil (32-36) Oklahoma, gal.	2¾ to 2¾c
Gas Oil (32-36) Gulf Coast, gal	4½ to 5c

PIPE AND FITTINGS—CAST IRON GAS PIPE.

(By Courtesy Iron Trade Review.)

Four-inch, Chicago	$63.20 to $64.20
Six-inch and over, Chicago	57.20 to 59.20
Four-inch, Birmingham	56.00 to 59.00
Six-inch and over, Birmingham	52.00 to 53.00
Four-inch, New York	69.60 to 71.60
Six-inch and over, New York	64.60 to 65.60
Standard fittings, Birmingham, base	115.00

6 to 24-inch, base; over 24-inch, plus $20; 4-inch, plus $20; 3-inch, plus $20.

BY-PRODUCTS

(By Courtesy of Oil, Paint and Drug

Ammonia aqua, 16 deg. drums lb.	5 to 5¼c
Ammonia aqua, 20 deg. drums lb.	6¼ to 6½c
Ammonia aqua, 26 deg. drums lb.	6½ to 7 c
Ammonia squa, anhydrous cylinder, lb.	30 to 36 c
Ammonium sulphate, bulk F. O. B. Works, per 100 lbs.	$2.45 to $2.50
Potash prussiate, yellow casks, lb.	18 to 18½c
Potash prussiate, red casks, lb	37½ to 40 c
Soda prussiate, yellow casks,	10½c
Soda sulphocyanide, barrels, lb.	45 to 55 c

COAL TAR BASIC PRODUCTS.

(By Courtesy of Oil, Paint and Drug Reporter)

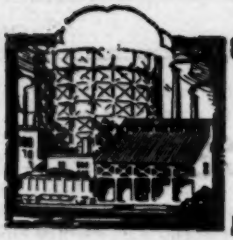
Benzol C. P. tanks, works, gal.	24 to 25c
Benzol, drums, gal.	30c
Benzol, 90% tanks, works, gal.	23c
Benzol, 90% drums, gal.	28c
Napthalene, flake, barrels, lb.	5 to 5½c
Napthalene, dyestuff bags, lb.	4½ to 5 c
Solvent Naphtha, water white works, gal.	24 to 25c
Solvent Naphtha, drums, works, gal.	29 to 30c
Toluene, C. P. tanks, works, gal.	31c
Toluene C. P. drums, works, gal.	36c

Coal Age Index of spot prices of bituminous coal showed no change during the past week, standing on August 11 at 163, the corresponding price being $1.98.

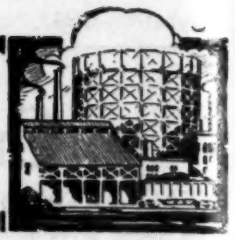
Hampton Roads dumpings for all accounts during the week ended August 7 totalled 358,915 net tons, an increase of 6,915 tons from the week preceding.

The production of bituminous coal for the week ending August 2 decreased slightly, the output according to the Geological Survey totalling 7,486,000 net tons. The previous week showed an output of 7,542,000 tons, according to the revised figures. Anthracite production decreased, being 1,720,000 net tons in the week ending August 2 and 1,837,000 tons in the previous week.

The anthracite and bituminous coal markets, strange to say, are in a similar condition. Both are feeble, but whereas the anthracite sales are few but declining, the bituminous sales are few but increasing. Canada is still a weak market for anthracite. Winnipeg seems to be responding to the active efforts of the Alberta producers, who are supplanting those of Pennsylvania. The short time in the southern anthracite field seems likely to be duplicated in the northern, making irregular operation general. But, at that, the anthracite region has a stability of output that makes the bituminous fields quite envious.



NEWS OF THE GAS INDUSTRY



Shall a Public Utility be Permitted to Spend Money for Advertising?

Shall a public utility company be permitted to spend money for advertising in the newspapers?

This was the question asked the Public Utilities Commission of Connecticut the other day in a hearing as unique in the annals of public service regulation as it is in the history of the advertising profession.

The facts disclosed at the hearing and the decision rendered, according to the Public Utilities Advertising Association, concern every newspaper publisher in the United States and every operator of a utility property who uses the advertising columns of his local newspapers for telling the public the facts about his company.

The defendant in the case was the Stamford Gas and Electric Company. The complainant was the City of Stamford, represented by Mayor Phillips. The decision was rendered by Chairman Higgins of the Connecticut Commission. The occasion for the hearing was a petition filed with the Commission by Mayor Phillips, protesting the right of the Stamford company to spend money for newspaper advertising. The advertisements in question were educational in character and explained the company's system of charging for gas service.

Perhaps the most interesting figure in the hearing was Mayor Phillips. He is a newspaper publisher himself. He owns the Darien Review, and, curiously enough, this is one of the newspapers in which the Stamford company advertises!

As the company explained it, "Publisher Phillips printed our advertisements in his paper. We got a bill and sent a check in payment. Mayor Phillips tells the Public Utilities Commission it ought to forbid us to advertise. Publisher Phillips cashes our check and it helps to pay the printer. Mayor Phillips contends that we should cut out advertising and distribute its cost to our customers. Publisher Phillips sends along a solicitor to make a contract with us for space in his paper."

When the hearing took place at the State Capitol at Hartford, interest was centered on Mayor Phillips. He was the first person called.

"The people," he said, in addressing Chairman Higgins, "ask you to stand behind them in their fight against a grasping monopoly which does unnecessary advertising."

"Have you any idea," asked the chairman, "how much the company spends in advertising and what amount you would consider proper?"

The Mayor was unable to answer the question, whereupon the company announced it had spent for advertising during the last year $1,290.85, and the advertising that provoked the hearing involved an expense of $689.40, from March 22 until the end of June.

Turning to the Mayor, Chairman Higgins asked, "You maintain that as a public utility company it should not do any advertising?"

The Mayor said there would be no objection to the advertising if the expense of it were taken out of the officers' salaries. Further on in his testimony, he said again, "I have no objection to advertising ipso facto if the cost of it comes out of salaries."

The company's attorney then presented his side of the case.

"We believe," he said, "that it is just to spend a reasonable amount for advertising. The telephone company, the railroad companies and other corporations do it. This is an era of advertising. I can see no reason why a public utility company should not advertise. It is especially desirable to remove false impressions."

Handing to the commission copies of the advertisements in question, he continued:

"I think you will find that these fairly state the arguments. They are mostly about our rates; they contain nothing unreasonable. We had to meet statements made in political speeches, in messages to the Council, and in various other ways. What has been the result? People have begun to understand our rates. People come to us and ask, 'Why did you not do it before?'"

The hearing closed at this point. Ten days later the commission announced its decision. After going into the subject matter of the advertisements and their cost, it said:

"The experience and observation of this commission have been that frequent complaints by patrons in matters relating to utilities are due to the omission of the utility to provide intelligent information.

"This commission has always advocated a proper amount of publicity on the part of utility companies in order that their patrons may be informed in a general way as to operating and financial conditions as affecting the rate payers.

"A fair and frank statement by a utility on controversial questions will assist in maintaining a relationship of good will and co-operation between the company and its patrons. While there is, of course, a financial limit to which a utility should not go in the matter of publicity, the commission does not find in the instant case many facts which would warrant its intervention. For the reasons stated herein, the petition is dismissed without further action on the part of the commission."

Commenting on the decision, Manager Leland of the Stamford company said:

"So far as I know, this is the first case on record where a public utility company's right to advertise has been challenged. The commission's decision upholds the right of a public service company to carry the story of its business direct to its customers through the medium of its local newspapers. Moreover, it advocates such a practice.

"We shall continue to advertise. If Mayor Phillips does not forbid Publisher Phillips to print our advertisements, we shall continue to advertise in Darien. Every little bit helps. The trolley company, the telephone company and about all the other public service companies spend something for advertising. None of them seems to have discovered that it's a naughty practice.

"Advertising, as we understand it, has two chief purposes. One of them is to cultivate the good will of patrons; the other is to increase business. Do you know that upon one occasion our company was rebuked by the Public Utilities Commission because we didn't do sufficient advertising? The commission was of the opinion that we ought to have given wider publicity to announcement of a change in rates.

"In our advertising we aim to tell people about our business. We want the good will of our patrons; we want to show that we are dealing fairly and frankly with them. We are trying all the time to sell more light, heat and power. The quantity we sell has a close relation to the rates we charge. So you see that advertising that increases business benefits our customers. As our business grows, down come rates. As good will increases, everyone is happier."

To Erect New Holder at Hudson, New York

In addition to the work which it is doing at the Hudson (N. Y.) plant of the Albany Southern Railroad Company, the U. G. I. Contracting Company of Philadelphia has now received order to install holder foundations and erect a 50,000 cu. ft. capacity holder at that plant.

Palm Beach Gas Co. Increases Plant's Capacity

West Palm Beach, Fla.—Installation of new equipment by the Palm Beach Gas Company at its plant recently gives West Palm Beach a plant of sufficient capacity to fulfill all requirements of the present population and provides for an expansion to take care of a city of 100,000, it was announced by R. B. Wagner, president of the firm.

Beginning August 15, and possibly before, the gas company plans to extend its mains both north and south from the center of the city at the rate of one mile a month.

Present equipment at the plant includes eight gas storage tanks, each with a capacity of 10,000 cubic feet. And in addition to the 80,000 cubic feet in the storage tanks, there are 35,000 cubic feet in the two holders.

Two old water gas sets, or producers, now merely are to be used in case of emergency. A new set has been installed which has eight times the capacity of either of the old ones. With the old machinery 18 hours a day were required to keep customers supplied with gas, and part of every day the supply would be inadequate because the original producers could not generate gas fast enough. Now, sufficient gas is produced to supply the city in four and a half hours.

Within two years it is planned to install another new set or producer with twice the capacity of the one which has been in operation for the past ten days. Eventually it is expected to remove the original sets now used as reserves with a still larger generating unit.

At present there are 15 miles of gas mains in the system of the Palm Beach Gas Company. Twelve hundred consumers are being served this summer and 1,400 were served in the past winter. Mr. Wagner predicts that next winter 1,800 persons would be using gas here, and that the number would not be reduced below 1,500 next summer. Plans of the company are being made in accordance with this estimate.

In February Mr. Wagner purchased the gas company from the Farmers Bank and Trust Company, receivers of the firm for about three years, and has remained here ever since. In addition to the plant here, Mr. Wagner owns gas companies in Michigan, Tennessee and Georgia. He has had many years of experience in this line of business.

Other officials of the company are W. K. Mundy, operating manager, and Charles R. Burnson, recently appointed business manager.

Gas Company Director Dies

Providence, R. I.—Col. George L. Shepley, well-known director of the Bristol (R. I.) County Gas Company, died at his summer home recently on Warwick Neck, R. I.

Mr. Shepley was well known in the business world of New York and Rhode Island, holding offices in a score of public service corporations, banks and industrial firms.

Ashland Gas Company Officers

Shenandoah, Pa.—The Ashland Gas Light Company, at its annual meeting, elected the following board of directors: Edwin C. Price, Walter Price, P. Adam Waldner, John Geating, H. Fred Lauer, Louis Bender, F. E. Heinze, A. Schoenberger and A. K. Walters. The directors later met and elected these officers: President, Edwin C. Price; vice-president, F. E. Heinze; seretary, H. Fred Lauer; treasurer, P. Adam Waldner.

Chehalis Gas Plant Capacity Increased

Chehalis, Wash.—Reconstruction aggregating $15,000 in cost is being done at the gas plant in this city, owned by the North Pacific Public Service Company, which supplies both Chehalis and Centralia. Installation of the new improvements will increase the capacity of the plant by one-third. Added supply of gas has been made necessary by increased demand for service in the Twin Cities, due to their rapid growth in recent months.

New Purifiers at Putnam (Conn.) Plant

The Eastern Connecticut Power Company has determined upon the installation of additional purifier plant at its Putnam works. It has awarded contract for this work to the U. G. I. Contracting Company, Philadelphia, who will install 15 ft. diameter steel purifiers with necessary foundations and connections required to make a complete plant.

Huntington Beach Cuts Gas Rate

Huntington Beach, Cal.—The report of W. R. Wright, superintendent of the gas department, calls for a cut in gas rates as follows: One thousand feet of gas, $1; 2,000 to 4,000 feet, 90c; 4,000 to 7,000 feet, 80c; 7,000 to 10,000 feet, 60c; 10,000 to 25,000 feet, 50c; 25,000 to 50,000 feet, 40c; 50,000 to 150,000 feet, 35c; 150,000 feet or more, 30c. The minimum in one month is $1. An ordinance was given its first reading for adoption of these rates.

Fort Myers to Have Gas by October

Fort Myers, Fla.—Gas will be flowing through the mains of Fort Myers municipal gas plant and into the housewife's gas stove by October 1. This is the opinion of D. C. Tenney, engineer in charge of the work.

All of the machinery and equipment, with the exception of the 34-foot holder tank and one or two minor items, is on the ground, the majority of it being in place. Work on surrounding the generator, boilers, still and machinery with the building will be started within a few weeks.

Practically all the mains have been laid with the exception of those to go under streets already paved.

The plant will have a capacity of 10,000 cubic feet of water gas an hour, with a storage capacity of 40,000 feet in tanks and 10,000 feet in the "holder tank."

Unusual efficiency in operation will be attained, Mr. Tenney pointed out from the fact that the 60-horsepower boiler being used has a larger firebox than usual, and a 70-foot stack, as against the customary 50-foot stack.

"The 15 miles of mains cover the whole city," explained Mr. Tenney. "Only a few scattered houses will not be accessible to gas when it is turned into the mains."

Gas Co. Purchases New Tract of Land

Portsmouth, N. H.—The Portsmouth Gas Company has purchased the property at 89 and 91 Water street, formerly owned by Ralph Trefethen, consisting of approximately 15,000 square feet of land. The houses on this land will be torn down to make way for new construction now being contemplated by the gas company.

The Portsmouth Gas Company has also deeded to the city free of charge seven and one-half feet of land in front of the old property. This, with the recent purchases by the city, will make possible the straightening of the street line at this point.

The Trefethen property was acquired on account of the necessity of plant expansion. The gas company wharf will be extended and a fill of 200 feet made.

Northern Indiana Gas and Electric Improving Plant

The Northern Indiana Gas and Electric Company is making considerable improvements to its plant at South Bend. Included in this work is the remodeling of the two 10 ft. diameter water gas sets and the installation of automatic controls. The contract for both the remodeling work and the installation of the automatic controls has been awarded to the U. G. I. Contracting Company, of Philadelphia.

New Contracts Awarded

The Gas Machinery Company of Cleveland, Ohio, has been awarded contracts for bench work, which is to be erected in the cities of Lynn, Mass.; Amsterdam, N. Y.; Mt. Clemens, Mich., and Jacksonville, Fla.

The benches at Jacksonville and Lynn are to have inclined silica retorts and settings, and the benches at Amsterdam and Mt. Clemens horizontal silica retorts and settings.

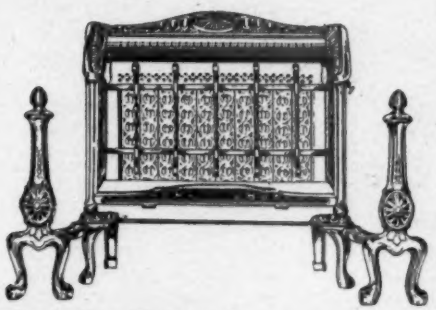
Permitted to Exercise Gas Franchise

Albany, N. Y.—The Public Service Commission issued an order permitting the Northern New York Utilities, Inc., of Watertown, to exercise gas and electric franchises in the city of Rome granted by the city to the Rome Gas and Electric Light and Power Company, recently purchased by the Utilities Company. The commission also approved the construction by the Utilities Company of electric transmission lines between Boonville and Rome and between Black River and Altmar.

The Northern New York Utilities, Inc., through its president, John N. Carlisle, held that the consent of the city of Rome was not necessary to the transfer of the gas and electric franchises, even though the franchises did not run to the successor or assigns, since there was no clause in the franchise requiring consent to such transfer. The city of Rome did not oppose the transfer.

With respect to the right of the Utilities Company to erect transmission lines without consent of the towns crossed, where no service is given in the towns, the commission held that inasmuch as the lines were to be entirely constructed on the company's own right of way except where highways are crossed, and in no case is there any construction on such highways, that the local consents were not required.

These Features of Welsbach Heaters Mean Big Sales for You



No. 27 with andirons. Furnished in either oxidized Brass or Black and Verde.

Equipped with ten glowers and self lighter. Can also be furnished without andirons.

Self Lighter

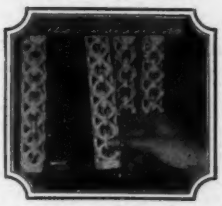
This is an exclusive Welsbach feature which starts a flame without using matches. A fat hot spark is flashed into the glowers, lighting the gas evenly and smoothly.

Welsbach Gas Heaters have numerous points of superiority which are distinctive to Welsbach design—features which are so valuable that they are producing sales wherever Welsbach Heaters are shown.

The questions people used to ask about gas heaters—"Are they economical?"—"Are they odorless?" are answered once and for all in the efficient performance of these super heaters.

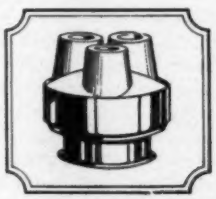
In the design of Welsbach Heaters you will find the very things which discriminating buyers insist upon having in the heaters they buy. Maximum heat production, resulting from an exceptionally efficient burner. Full radiation of heat—produced by metal reflector. Absolute convenience found in eliminating the need for matches and using a pyrophoric self lighter instead. Proper combustion insured by screening the air used, thus keeping all dust and dirt from the burner caps.

The Welsbach line offers a wide choice of attractive models for both portable or fireplace use, in styles and finishes to meet every taste. It is the most practical means of extending the use of gas as an auxiliary heating service among your consumers. Make use of it to increase your sales.



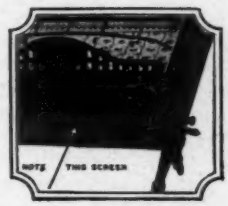
Glowers Kept from Breaking

Note the way Welsbach glowers are set in place. They can't fall out and break, although each glower can easily be removed.



Burner Tips That Don't Clog

Welsbach burner tips have a fire-clay top—not one of metal which rusts, corrodes and clogs. Tips are designed for both natural and artificial gas. The illustration shown above is for artificial heating power.



Protection from Dust

The wire screen shown over the air intake is another exclusive Welsbach feature. It prevents dust from clogging the burner orifices and insures proper combustion and maximum

WELSBACH COMPANY

Gloucester New Jersey

Member American Gas Association

Welsbach GAS HEATERS

Advertisements are to be Acted upon.

Sinking Fund Bond Issue Oversubscribed

The $3,000,000 Luzerne (Pa.) County Gas and Electric Company 20-year 7 per cent sinking fund bond issue recently put on the market has been oversubscribed. Announcement of this has been made by the officials of the company at Philadelphia. The bonds have been guaranteed by the American Gas Company.

M. P. Royal New Gas Co. Manager

Kokomo, Ind.—M. P. Royal has assumed the position as manager of the Kokomo Gas and Fuel Company plant, succeeding A. B. Smith, who resigned, and who goes to the Peoples Gas, Light and Coke Company, of Chicago.

Manager Royal has been in the gas business since 1896, starting with the Lafayette Gas Company, having worked in practically all branches of the business, from meter repairs, street lamp maintenance and general utility man. In 1913 he was transferred to Frankfort as superintendent of the plant there. In 1920 Mr. Royal was given complete charge of the Frankfort property. He resigns this position to come to Kokomo.

Potrero Gas Plant to Be Enlarged

San Francisco, Cal.—In order to meet the rapidly increasing demands for gas at the Potrero gas plant, the Pacific Gas and Electric Company is preparing to expend $73,300 for the installation of one electric driven and one steam driven compressor with the necessary auxiliaries and piping.

There are now supplied from the San Francisco plants 148,465 gas consumers, who used during the month of May 676,565,000 cubic feet of gas. To make this gas, approximately 5,096,868 barrels of oil were used.

Northern Indiana Gas & Electric Co. to Have New Office Buildings

Hammond, Ind.—Plans for the construction of an office building to house the general offices of the Northern Indiana Gas and Electric Company and the local offices and merchandise store of the company have been announced.

The company has purchased a site in the heart of the business section of the city and will build a three-story office building costing approximately $150,000. With the site the improvement will represent an investment of about $220,000. An architect has been engaged to draw plans and construction work will begin in the near future. It is expected that the building will be ready for occupancy next summer.

When completed the new general office building of the company will be the largest structure in northern Indiana occupied exclusively by one public utility company.

The first floor of the building will contain a large merchandise sales and display room and local departments of the company which deal directly with the public. The second floor will contain the general offices of the company, including the accounting forces of the comptroller's office, the purchasing agent's department and the office of the manager of industrial relations. Executive offices of the Hammond district will also be located on this floor. The third floor will contain a large assembly room for the use of employees for business meetings and recreation purposes.

While present plans for the new office building provide for a three-story structure, the building will be so designed that two additional stories may be built at some later date as the business of the company demands more space.

Gas Replaces Brazier in Japanese Household

The charcoal brazier, characteristic of Japanese homes for many years, is being displaced rapidly by the gas stove, according to the Pennsylvania Public Service Information Committee.

Japan is using also 1,000,000 gas lamps in city streets and 2,300 gas engines in the tiny factories that produce everything from ivory carvings to tooth-brush handles and from sandals to sausages.

Gas production today, with 10,000,000,000 cubic feet annually, is double that of 1914. Seventy-six companies, as compared with ten in 1914, furnish the service.

Another Dixon Product

The Joseph Dixon Crucible Company, Jersey City, N. J., manufacturers of Dixon's Silica-Graphite Paint, have placed on the market another paint product known as Dixon's Red Lead-Graphite Primer. For over a year it has been subjected to tests under usual conditions by practical painters and found to meet the most rigid requirements.

The pigment of this primer consists of flake silica-graphite, red lead and high grade oxide of iron. The vehicle is the best boiled linseed oil obtainable. The primer will dry perfectly in 22 hours under normal conditions. It will cover approximately 400 square feet to the gallon on metal surfaces.

Dixon's Red Lead-Graphite Primer has the good qualities of red lead together with the well-known water-repellant advantages of a high-grade silica-graphite paint. Under application it lessens the "drag" on the painter's arm and is not so severe on the wearing qualities of the brush as red lead. It will not chip nor scale off, has greater covering power than red lead and costs considerably less.

It fully meets the needs of those who prefer a red lead paint for priming coats.

Public Service Commission Approves Franchise

Albany, N. Y.—Approval of a franchise given by the city of Oneida to the Adirondack Power and Light Corporation for supplying that city was gas for light, heat and power, has been granted by the Public Service Commission. The company has been furnishing gas in Oneida for several years, but the old franchise under which the company had operated had expired.

Saugerties Gas Light Co. to Extend Mains

The Saugerties (N. Y.) Gas Light Company has been given permission by the Public Service Commission to extend its mains for furnishing manufactured gas for light, heat or power to Glasco, in the town of Saugerties, Ulster county. A franchise was granted by the town board February 14, 1920. No other company is now furnishing gas in this territory.